



**NOAA Teacher at Sea
Clare Wagstaff
Onboard NOAA Ship JOHN N. COBB
June 1 – 14, 2008**

NOAA Teacher at Sea: Clare Wagstaff

NOAA Ship JOHN N. COBB

Mission: Alaskan Harbor Seal – Pupping Phenology & Critical Habitat Study

Geographic Area: Southeast Alaska – Little Port Walter and Warren Channel

Date: June 3, 2008

Contact Information

Clare Wagstaff

Sixth and Eighth Grade Science Teacher

Elmwood Franklin School

104 New Amsterdam Ave

Buffalo, NY 14216

(716) 877-5031

cwagstaff@elmwoodfranklin.org

Weather Data from the Bridge (information taken at 1200)

Weather: Overcast

Visibility (nautical miles): 10

Wind Speed (knots): 12

Wave Height (feet): 3

Sea Water Temp ($^{\circ}$ C): 8

Air Temp ($^{\circ}$ C): 10.5

Science and Technology Log

This morning Skilled Fisherman (Mills), Dave and I headed out at low tide to explore an area called Big Port Walter. This is located in the next bay over from Little Port Walter where the COBB had docked for the night. Dave had not explored this area before and so he was keen to see if there were any new locations he could record. Sure enough, not long into the ride in the skiff, we came across

a rocky reef and a group of harbor seals. Carefully, Mills brought the skiff around to the opposite side of the small island for us to disembark and walk gingerly over the slippery rocks covered



Setting off in the JC-1 skiff for a morning of harbor seal observations.

with kelp and algae to get a closer look at these beautiful mammals. We were careful to keep a low profile and not make any large silhouettes that could alert them to our presence.



Photograph courtesy of Dave Withrow. The question is, who is watching whom? Seals are mammals and so have hair covering their bodies. The underbelly of the seals pictured appears still wet, but their backs have dried in the sun and so appear more fur like (blue arrow).

Identifying a Harbor Seal

The similarities between the Alaskan Pinniped species can make the initial positive identification of a harbor seal (*Phoca vitulina*) challenging to the untrained eye. In the locations we are studying on this cruise the only seal species likely to be encountered is the harbor seal. However, these seals still have relatives that look very similar to them. Harbor seals, sea otters, California sea lion and Steller (Northern) sea lion are all carnivorous mammals in the suborder Pinnipedia. These animals have developed adaptations for deep diving, swimming, thermoregulation, water conservation and great sensory adaptations and can be easily misjudged in the water for one another.

So how can we tell them apart? Sea lions have external ear flaps (these are absent in seals) and use their long front flippers for propulsion. Otters are generally smaller and spend a large proportion of their time floating on their backs. A seal though does not do this, has shorter front flippers and is not as agile on land. Their appearance reminds me of an over inflated sausage-shaped balloon! Graceful underwater, they struggle and look awkward on land. Dave informed me that both the male and female harbor seals appear the same size and shape, making it difficult to tell them apart. Today I observed a variety of different colors of fur, ranging from nearly all white through to nearly all black. The fur markings also vary. Spots, rings, and blotches are common variations. These colorations and fur patterns of a seal are believed to be quite random. A mother lighter and more spotted in pattern does not guarantee an offspring of the same appearance. To date, I have only observed one pup, although Dave, with his keen eyes and experience, has recorded quite a few. Pups have no obvious markings to identify them by. However, they are smaller and will be generally located next to its larger mother, possibly even

suckling. Although seals tend to haul out in large groups for safety, the mothers of particular young pups may be located towards the edge of the crowd.

Further Exploring

We recorded a total of 17 seals and three possible pups this morning but our exploration didn't end there! Further down into the bay we came across an old abandoned salting or canning factory probably for Herring, estimated to be from around the 1950's. Broken down and severely rusting from the extreme elements and the effects of saltwater, it looks like something from a sci-fi movie! Its location here was probably due to the ready supply of fresh water from the impressive waterfalls and fast running stream close by. Its sheltered location probably protected it from the bigger storms and the deep water of the bay would have meant larger ships could have transported goods easily to and from it.



The disused factory in Large Port Walter. Photograph courtesy of Dave Withrow.

Personal Log

Today has been full of highs and lows. Seeing my first group of seals up close was something magical! Although we only observed them for approximately ten minutes, to see them so close and in the wild was amazing. Each seal seemed to have a personality. One scratching its face, another making grunting noises at another seal that appeared to be too close. As Dave and I sat there, it became obvious that a few of the seals were aware of our presence, their heads poking up looking at us. It made me wonder, who was really studying whom?!

Disaster on the COBB!

Unfortunately, the rest of the COBB's day was not so successful. Around 17:00 hours the crew heard a loud grating sound coming from the ship as we were making our way to San Fernando

Island. According to CO Chad Cary, a propulsion casualty has left us now anchored near Warren Island (55° 54' N 133° 49' W) and the US Coast Guard is in transit to tow us part of the way back to Juneau. Hopefully, there a dive team will be able to assess the damage to the ship. If the damage is minor and easily repairable, then we will resume the mission focusing on last leg of the planned trip, the glacier area. But things aren't looking too hopeful and we will probably be docked back in Juneau for sometime. Selfishly I don't want to go home yet. There is so much to see here that three days is not enough! Looks like tomorrow will be a long day.



NOAA Teacher At Sea, Clare Wagstaff, in her survival suit on the beach at Lovers Cove, Big Port Walter.